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U.S. Patent

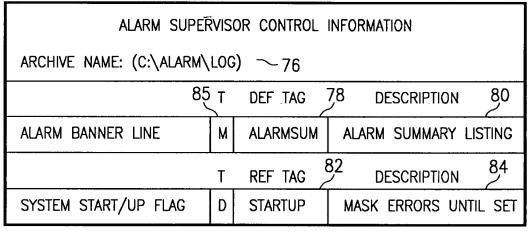


FIG. 3a

ALARM SUPERVISOR ATTRIBUTES CONFIGURATION TABLE INITIAL **ACKNOWLEDGE NORMAL GROUP ACTION HISTORY** UNACK COLOR COLOR COLOR FG **BG** RI ACK **AUD** FG BG BLFG BG **PRT** NAME BL DSK 88-**CRITICAL** RED YES YES YES GRN BLK BLK NO **BLK** YEL NO YES **LOWLEVEL** BLUE BLK YES YES NO NO NO 90 1 100 102 104 106 92 94 96 108 110 112 98 114 116 FIG. 3b

ALARM SUPERVISOR LINKAGE CONFIGURATION TABLE **ALARM** VALUE **REF TAG** STAT **GROUP** PR **MESSAGE** T **REF TAG** MSK 134a~ **TEMPHI** TEMPERATURE TOO HIGH **TEMP** ON CRITICAL YES 134b~ **TEMPLO** D ON **LOWLEVEL** TEMPERATURE TOO LOW **TEMP** YES 2 134c~ D LEVELHI ON **CRITICAL** 1 LEVEL TOO HIGH LEVEL YES 134d~ D **LEVELLO** LOWLEVEL LEVEL TOO LOW YES ON 2 LEVEL 134e~ D **CRITICAL** VALVE STUCK **FLOWFAIL OFF** NO 134f ~ HEATFAIL **OFF CRITICAL** HEATER BROKEN NO 120 122 124 126 128 130 132

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L

12:52:0	4		ALA	ARM SUM	MARY	TUE 01/05/1985			
						ALARMS = 2			
>>							HIGH OVERF	LOW	
F1 GROUP	F2	F3 SORT	F4	F5 BANNER		F7 PRINT	F8 PURGE		F10 CLEAR

FIG. 3d

MATH AND LOGIC UNIT CONFIGURATION TABLE DEF TAG T G **FORMULA DESCRIPTION** 146a~ Α **TEMP** (TEMPF - 32) * 5/9F TO C 146b-**TEMPHI** D 1 TEMP > 55SET HIGH TEMP ALARM 146c-TEMP < 50 D **TEMPLO** SET LOW TEMP ALARM 146d-IF LEVEL > 100 D LEVELHI 146e-IF LEVEL < 90 D **LEVELLO** 1 146f -FLOW VALVE ON/OFF D **FLOW** LEVEL < LEVELSET 1 146g-TEMP < TEMPSET HEATER ON/OFF D HEAT 1 NOT (FLOW OR HEAT) OR MIN 20 146h-20 MIN OR HEAT/FLOW OFF D **STARTUP** 2 136 142 138 140 144

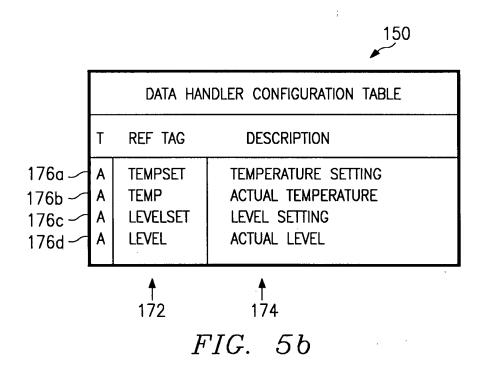
FIG. 4

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DATA HANDLER CONTROL INFORMATION											
LOG NUMBER (1,2,3,4,5): (1) LOG NAME: (C:\ACCURACY\LOG) ~154 ARCHIVE NAME: (A:\ACCURACY) ~156 REPORT FORM: (STD 80) ~158											
TRIGGER T REF TAG DESCRIPTION											
START INTERVAL STOP	D D D	~160 MIN1 ~164 MIN5 ~168	The second secon								

FIG. 5α



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EVENT TIMER CONFIGURATION TABLE *										
Т	DEF TAG	MN	DD	DW	НН	ММ	SS	DESCRIPTION		
D D D	STARTDAY STOPDAY FRI5PM XMAS	DEC	25	RI	8 17 17			EVERYDAY AT 8:00 AM EVERYDAY AT 5:00 PM FRIDAY AT 5 PM CHRISTMAS		
	↑ 179	† 180	† 182	† 184	† 186	† 188	† 190	,		

FIG. 6α

INTERVAL TIMER CONFIGURATION TABLE * Τ DEF TAG HH MM **DESCRIPTION** SS 200a ~ **EVERY 5 SECONDS** D SEC5 5 EVERY 1 MINUTE 200b ~ MIN1 D 1 200c -D MIN5 5 **EVERY 5 MINUTES EVERY 20 MINUTES** 200d ~ D MIN20 20 192 194 196 | 198

FIG. 6b



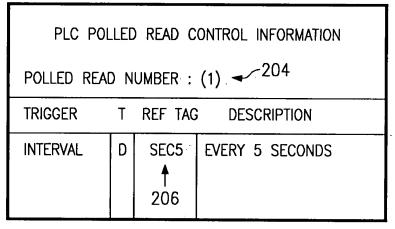


FIG. 7a

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	PLC POLLED READ CONFIGURATION TABLE										
	T	DEF TAG	UNIT	ADRS	DESCRIPTION						
215a - 215b -	Α	TEMPF	15	115	ACTUAL TEMPERATURE IN FAHRENHEIT						
215b ~	Α	LEVEL	15	116	ACTUAL LEVEL						
	D	HEATFAIL	15	121	HEATER FAILURE						
	D	FLOWFAIL	15	122	VALVE FAILURE						
		†	†	↑							
		210	212	214							

FIG. 7b

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	PLC WRITE CONFIGURATION TABLE										
	T	REF TAG	UNIT	ADRS	DESCRIPTION						
224a ~ 224b ~	D D	FLOW HEAT † 218	15 15 † 220	114 114 1222	TURN ON OR OFF FLOW TURN ON OR OFF HEATER						

FIG. 7c

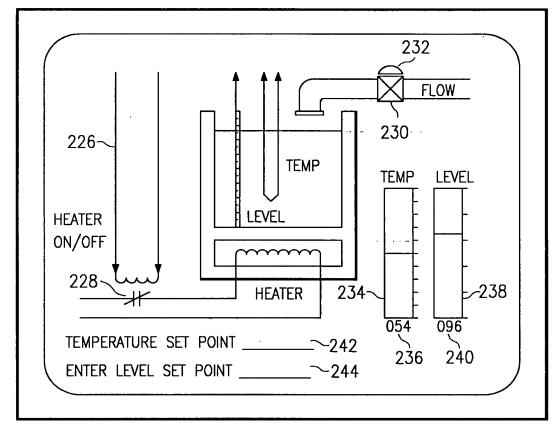


FIG. 8a

FIG. 8b

	GRAPHICS MODE DISPLAY CONFIGURATION TABLE									
	DISPLAY NAME : (SCREEN1) ──254									
	T REF TAG OBJECT DESCRIPTION									
252a / 252b / 252c / 252d / 252e / 252f / 252g / 252h / 252i / 252j /	D A A D A A M M D D	HEAT TEMP TEMP FLOW LEVEL LEVEL DISPLAY ALARMSUM FLOWFAIL HEATFAIL	PAINT1 BAR1 NUMBER1 PAINT2 BAR2 NUMBER2 SCREEN TEXT1 PRINT3 PRINT4	TURN ON OR OFF HEATER ACTUAL TEMPERATURE ACTUAL TEMPERATURE TURN ON OR OFF FLOW ACTUAL LEVEL ACTUAL LEVEL NEW GRAPHICS SCREEN ALARM SUMMARY LISTING VALVE FAILURE HEATER FAILURE						
,		↑ 248	↑ 250							

